ANNALS OF THE NEW YORK ACADEMY OF SCIENCES
Special Issue: *Pathways to Resilience: Adapting to Sea Level Rise in Los Angeles*
TECHNICAL REPORT

# Pathways to resilience: adapting to sea level rise in Los Angeles

Jeroen C.J.H. Aerts,[1] Patrick L. Barnard,[2] Wouter Botzen,[1,3] Phyllis Grifman,[4] Juliette Finzi Hart,[2] Hans De Moel,[1] Alyssa Newton Mann,[4] Lars T. de Ruig,[1] and Nick Sadrpour[4]

**Beach nourishment and living shorelines are some of the most cost effective strategies for promoting coastal resiliency**

# Informing Decisions on Selection and Design of Nature-based Solutions for Coastal Resilience

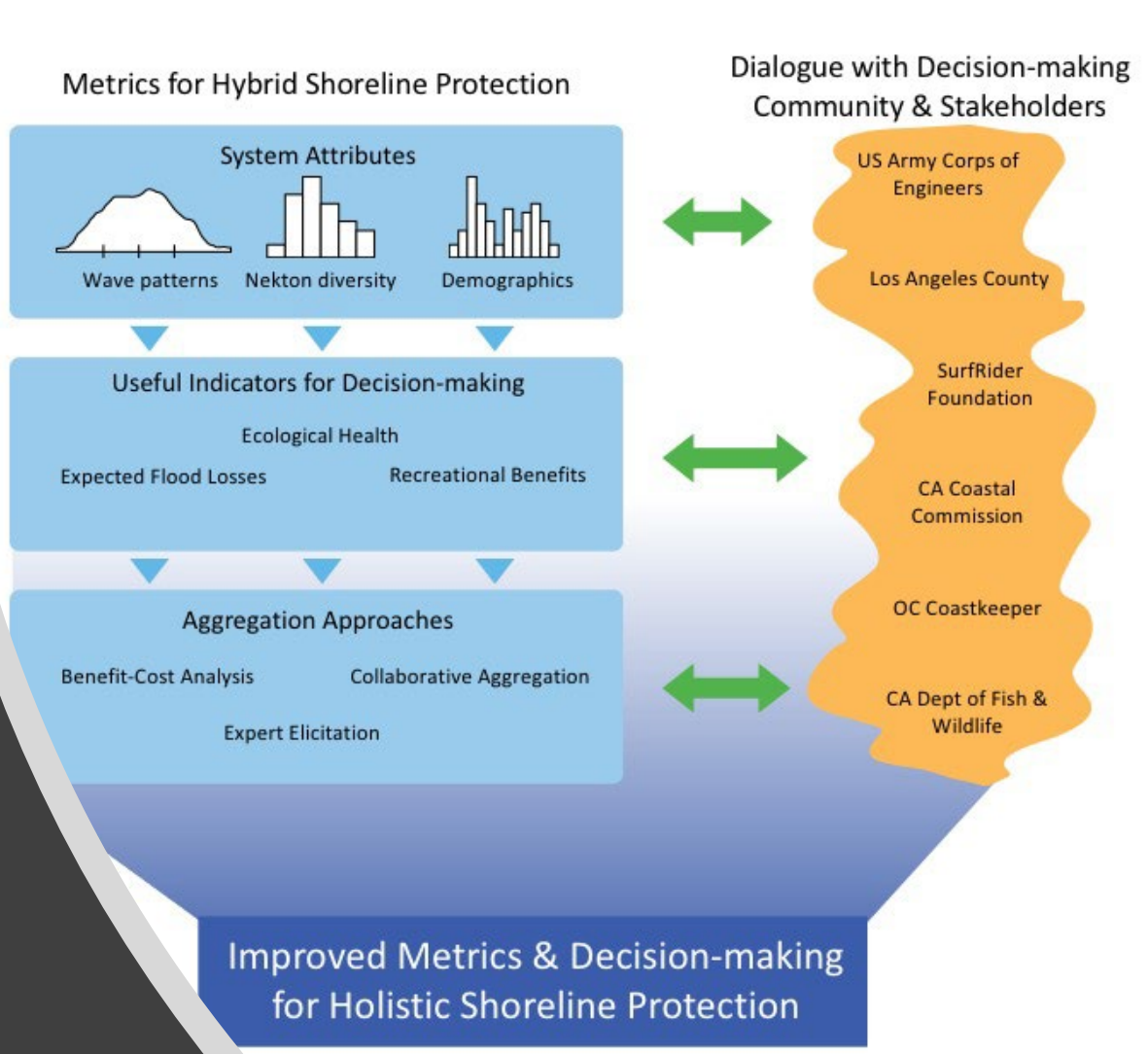
**Hybrid (green-gray) infrastructure projects for high energy shorelines are being promoted as a multi-benefit solution for coastal resilience**

**Assessing relative benefits of each desired attribute (e.g. flood hazard reduction, habitat) is challenging**

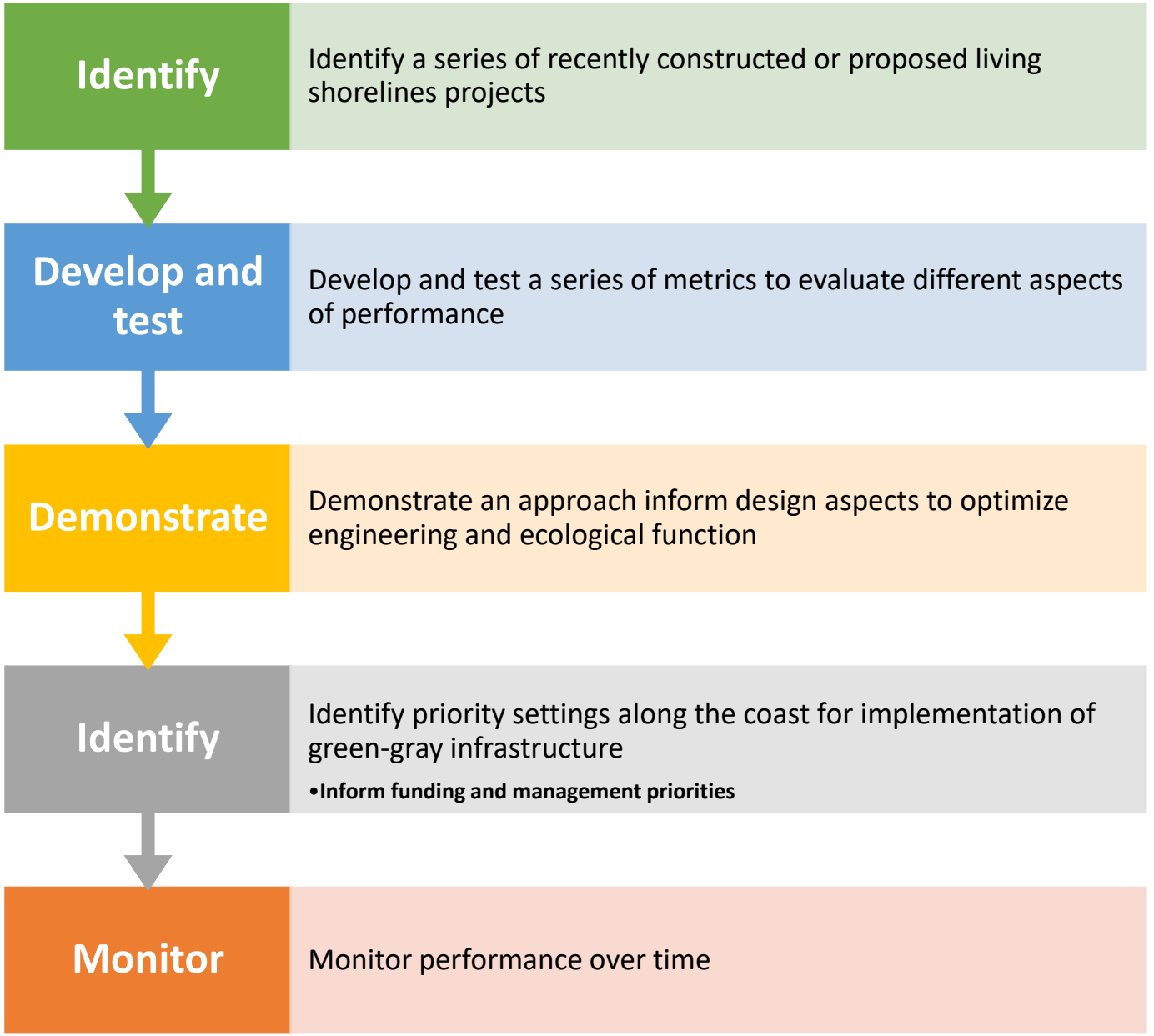
**Need an assessment framework to holistically evaluate project benefits and costs and how they change over time in light of shifting conditions (e.g. changing risk due to sea level rise)**

# Pilot Project between UCI and SCCWRP

- Create initial assessment framework
- Identify preliminary metrics
  - flood/erosion protection
  - ecological benefits
  - recreational use and aesthetics
- Develop approach to aggregating across individual indicators
- Assess how relative benefits change under different sea-level rise & storm event scenarios
- Apply these criteria to existing and proposed projects in Southern California → ***partnership opportunities***



# Expanding SCCWRP Research



# Options and Opportunities

- Pursue research to inform design and siting decisions
- Develop monitoring and assessment tools
- Support training and technology transfer